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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,733	12/05/2003	Eric M. Rohrbaugh	2507-6021US (22029-US)	1717
24247	7590	02/08/2006		
TRASK BRITT P.O. BOX 2550 SALT LAKE CITY, UT 84110			EXAMINER RODRIGUEZ, WILLIAM H	
			ART UNIT	PAPER NUMBER
			3746	
DATE MAILED: 02/08/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/728,733

Applicant(s)

ROHRBAUGH ET AL.

Examiner

William H. Rodriguez

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 19-21, 24, 40 and 42-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 40 is/are allowed.
- 6) ☒ Claim(s) 1-5, 42, 43 and 45 is/are rejected.
- 7) ☒ Claim(s) 19-21, 24, 44 and 46 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to the amendment and remarks filed 11/15/05. Since the examiner has applied new grounds of rejection, this office action is being made non-final to afford the applicant the opportunity to respond to the new grounds of rejection.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 42, 43 and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by **Denoel et al. (US 5,765,367)**.

With respect to claim 1, **Denoel** teaches a propulsion system, comprising: a pressure vessel containing a propellant 14; at least one axial thrust valve 40 (cl. 2 ll. 46-49) in communication with the pressure vessel and configured for selectively releasing gases generated by combustion of the propellant within the pressure vessel to directly provide axial thrust (when nozzles 32_3 and 32_2 are not in use); and at least one maneuver control valve 34 in communication (fluid communication) with the pressure vessel and configured for selectively releasing gases (cl. 2 ll. 38-40) generated by combustion of the propellant within the pressure vessel to provide thrust for maneuvering. See **Figures 1 and 2** of Denoel.

With respect to claim 2, **Denoel** teaches that the propellant 14 comprises at least one solid propellant grain.

Art Unit: 3746

With respect to claim 3, **Denoel** teaches that the at least one axial thrust valve 40 is configured as a proportional valve.

With respect to claim 4, **Denoel** teaches that the at least one maneuver control valve 34 is configured as a proportional valve.

With respect to claim 5, **Denoel** teaches that the at least one axial thrust valve 40 is in communication with a thruster 32_1 located and oriented to provide axial thrust along a longitudinal axis.

With respect to claim 42, **Denoel** teaches an apparatus comprising: a pressure vessel, a solid propellant charge 14 disposed within the pressure vessel for generating combustion gases; a selectively operable axial thrust valve 40 (cl. 2 ll. 46-49) for release of the combustion gases from the pressure vessel to directly provide axial thrust (when nozzles 32_3 and 32_2 are not in use); and a plurality of selectively operable maneuver control valves 34 (cl. 2 ll. 38-40) for release of the combustion gases from the pressure vessel. See **Figures 1 and 2** of **Denoel**.

With respect to claim 43, **Denoel** teaches that the solid propellant charge 14 exhibits the lowest possible steady state burn rate when the axial thrust valve 40 is fully open and the plurality of maneuver control valves 34 are fully closed.

With respect to claim 45, **Denoel** teaches that the axial thrust valve 40 and the plurality of maneuver control valves 34 comprise proportional valves.

Allowable Subject Matter

3. Claim 40 is allowed.

Art Unit: 3746

4. Claims 19-21, 24, 44 and 46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments


5. Applicant's arguments with respect to claims 1-5, 42, 43 and 45 have been considered but are moot in view of the new ground(s) of rejection. See detailed rejection above.

Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Rodriguez whose telephone number is 571-272-4831. The examiner can normally be reached on Monday-Friday 7:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe can be reached on 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


William H. Rodriguez
Primary Examiner
Art Unit 3746

2/3/06